

few have had the opportunity to study carefully in its summer home, another on the nesting of the Redstart¹ and an account of a tame Olive-backed Thrush² which she raised from a nestling.—W. S.

Washburn's 'Further Observations on Minnesota Birds.'³—Minnesota birds bid fair to be well cared for in the future, for in addition to Dr. Roberts' list we have another circular from the Agricultural Experiment Station on common birds, by the State Entomologist, Mr. F. L. Washburn. This is issued in response to the great demand in the schools for a similar earlier publication (Circular 32). Twenty-three familiar species are described in a popular way and illustrated by cuts from 'Citizen Bird' representing paintings by Louis Agassiz Fuertes, which have been very well printed. Mr. Washburn's pamphlet should prove very satisfactory for school use.—W. S.

Recent Papers on Bird and Game Protection.—Dr. Walter P. Taylor⁴ at the Meeting of the American Association of Museums in San Francisco read an important paper, reviewing the carelessness of legislative bodies in passing laws affecting wild birds and animals which have operated toward the extinction of really valuable species. He then pointed out an important function of the museum in placing at the service of the State the results of its technical and economic investigations and in training experts who can work directly for the State in the investigation and conservation of the native fauna.

Two recent pamphlets from the Biological Survey are Mr. Henshaw's report as Chief of the Survey⁵ and the report of the governor of Alaska on the Alaska Game law.⁶ The bird work outlined by Mr. Henshaw has been largely published in special reports already noticed in these columns, and covers the mortality of wild ducks on Great Salt Lake; ducks in relation to oyster industry; food of wild ducks; collecting of data on migration and distribution; notes on conditions of ten national bird reservations are given and on the enforcement of the Migratory Bird Law. Importations of foreign birds total 270,000 for the year 1915, of which 216,000 were canaries. In Alaska the bag limit for game birds has been of great value in

¹ *A Skillful Architect [The Redstart].* By Cordelia J. Stanwood. *The House Beautiful*, February, 1916. pp. xl-xlii.

² *The Chronicle of a Tame Olive-backed Thrush.* By Cordelia J. Stanwood. *Wilson Bulletin*, No. 93, December, 1915.

³ *Further Observations on Minnesota Birds: their Economic Relations to the Agriculturist.* By F. L. Washburn. Circular 35, Minn. Exper. Sta. January 15, 1916.

⁴ *The Museum of Natural History and the Conservation of Game.* By Dr. W. P. Taylor. *Proc. Amer. Asso. of Museums*, IX, pp. 96-103, 1915.

⁵ *Report of Chief of Bureau of Biological Survey.* By H. W. Henshaw. *Ann. Rep. U. S. Dept. Agr.*, 1915, reprint, pp. 1-15.

⁶ *Report of the Governor of Alaska on the Alaska Game Law* By J. F. A. Strong. pp. 1-18.

saving from extinction grouse, ptarmigan and water fowl in certain sections, while the law against spring shooting is generally respected.

The New Jersey Audubon Society has issued an attractive annual report,¹ devoted especially to the Junior Audubon class work.— W. S.

A Beginning of Philippine Economic Ornithology.— Mr. Richard C. McGregor, Ornithologist of the Philippine Bureau of Science has undertaken the study of the economic value of birds in the Philippines, in which work he has the support and coöperation of the Agricultural Congress. A circular requesting information has been issued, accompanied by a card upon which the data can be entered. There has been published also a press bulletin² intended to arouse interest in the work. This publication illustrates some common types of Philippine birds, and contains general notes on the food of many species, and specific data on a few.

It is to be hoped that good progress can be made on the elucidation of the economic ornithology of the Philippines, and that the results in rational protection of birds will be satisfactory.— W. L. M.

Collinge's 'Some Observations on the Rate of Digestion in Different Groups of Wild Birds.'— Under this caption, Professor Walter E. Collinge summarizes³ the investigations of other workers, and presents the results of his own studies on rate of digestion in the Rook, Starling, and House Sparrow. The various findings agree very well that the contents of the stomach are completely digested in about four hours. From this it would seem that the human plan of three meals a day must be largely prevalent among birds. The reviewer has presented evidence⁴ that a much larger number of meals may be taken when the food consists of particularly delicate insects.— W. L. M.

Economic Ornithology in Recent Entomological Publications.— In "Some notes on the western twelve-spotted . . . cucumber beetles,"⁵ Mr. R. A. Sell notes that "The only birds observed actually eating these insects were the purple finch, the bush-tit, the linnet and the canon wren." The Biological Survey records add to this list: the Pipit, Wren-tit, Tule Wren, Red-shafted Flicker, Steller's Jay, Yellow Warbler, Western Yellow-bellied Flycatcher, Traill's Flycatcher, Brewer's Blackbird, Western Yellow-throat, Lutescent Warbler, Barn Swallow, Russet-backed Thrush, Bullock's Oriole, California Shrike, Valley Quail, Gambel's Quail, Cliff Swallow, California Towhee, Spurred Towhee, Black Phoebe, Vigor's Wren, and Black-headed Grosbeak. Some of these birds feed extensively

¹ Fifth Annual Report of the New Jersey Audubon Society. Oct. 5, 1915. pp. 1-23.

² No. 32, rev. Bureau of Science, 14 pp., Dec. 29, 1915. Birds in Their Economic Relation to Man.

³ Journ. Econ. Biol., Vol. X, No. 3, Sept., 1915, pp. 65-68.

⁴ Yearbook, U. S. Dept. of Agriculture, 1912 (1913) pp. 402-403.

⁵ Journ. of Economic Ent., Vol. 8, No. 6, Dec. 1915, p. 518.